

REMARKS

In the April 29, 2005 Office Action, the Examiner rejected claims 1, 3, 4, 6-9, 11, 12, 14-17, 19, and 20 under 35 U.S.C. § 102(b) as anticipated by or, alternatively, under 35 U.S.C. § 103(a) as obvious over the Robinson reference, UK Patent Application No. GB 2,214,633 A (“Robinson”). In addition, the Examiner rejected claim 15 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,230,466 to Moriya et al. (“Moriya et al.”). Finally, the Examiner rejected claims 2, 5, 10, 13, and 18 under 35 U.S.C. § 103(a) as obvious over Robinson in view of prior art disclosed by Applicant in FIG. 1 of the application.

Taking the Examiner’s rejections together, Robinson is applied either as a sole anticipatory reference or as a primary obviousness reference to reject 19 of the 20 claims, and Moriya et al. is applied as a sole anticipatory reference to reject the only other claim (claim 15). The devices disclosed in both Robinson and Moriya et al. require fans to create the air flow necessary to perform their humidification and dehumidification functions. In Robinson, the fan is shown at reference numeral 18 in FIGS. 2 and 3, while in Moriya et al. the fan is shown at reference numeral 16 in FIGS. 1 and 3-10.

In Robinson, the fan is driven by an adjustable-speed electric motor and is controlled by a microprocessor in combination with a plurality of sensors and switches that sense temperature and/or humidity. See, e.g., Robinson, p. 8, lns. 17-20, and p. 9, ln. 3 to p. 11, ln. 6. The fan noise is partially reduced by ducting in the housing of the device, see id. at p. 8, ln. 23 to p. 9, ln. 2, and a removable screen is provided to minimize airborne particles sucked into the housing by the fan, see id. at p. 11, lns. 24-28 and p. 12, lns. 24-28. This plethora of structures in

Robinson that centers around the fan indicates that the fan is of central importance in the Robinson device.

In the device disclosed in Moriya et al. the fan is similarly important. In the desorption process of the dehumidification operation disclosed in Moriya et al., the fan is switched on and off depending on temperature and humidity conditions, see Moriya et al., col. 7, lns. 3-11, 27-38, while in the adsorption process of the dehumidification operation disclosed in Moriya et al. the fan is similarly switched, see id. at col. 7, lns. 44-63, or in another embodiment, is controlled to work at maximum or minimum ventilation capacity, as necessary, see id. at col. 8, lns. 20-50. The fan plays a similarly critical role in the dehumidification operation with ventilation, see id. at col. 9, lns. 16-21, 26-32, 39-49, and the humidification operations of the device, both without ventilation, see id. at col. 10, lns. 38-49, col. 10, ln. 64 to col. 11, ln. 25, and with ventilation, see id. at col. 12, lns. 7-19, 30-57. Furthermore, the fan is affirmatively claimed in claims 1 and 7, the only two independent claims in Moriya et al.

The product and method disclosed and claimed in the present application does not include a fan. In fact, a fan would likely be unacceptable in the product disclosed and claimed in the application because of the frequent need for pianos to be played in noise-intolerant environments such as recording studios and concert halls. For instance, in such environments, microphones are frequently oriented near the soundboard of the piano, as is the piano humidistat. A spinning fan in the piano humidistat would likely be heard with the electronic assistance of the microphones, if not acoustically, thereby interfering with the sound of the piano in a manner that could be heard by performers and audiences and on recordings. In lieu of a fan, the invention relies upon the “chimney effect” brought about by the heat of the electrical circuitry within the

humidistat in combination with the internal architecture of the humidistat to cause air flow through the humidistat. See, e.g., Specification ¶ 12.

Claims 1, 7, 12, 15, and 20 in the present application, the only pending independent claims, have herein been amended to indicate that the airflow path through the humidistat is fanless. Given the centrality of the fans in the Robinson and Moriya et al. references, neither of them may serve as anticipatory references or primary obviousness references against the claims as amended. First, looking at anticipation, neither Robinson nor Moriya et al. disclose a device with a fanless airflow path; instead they disclose only devices that include fans in their airflow paths. Since a reference must teach every element of a claim in order to anticipate that claim under 35 U.S.C. § 102, neither Robinson nor Moriya et al. anticipates any of the pending claims as herein amended. See, e.g., Verdegaal Bros. v. Union Oil Co., 814 F.2d 628, 631 (Fed. Cir. 1987) (“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”). Second, looking at obviousness, a device disclosed in the prior art cannot be cited as a primary obviousness reference if the hypothetical modification of the device required in the obviousness analysis renders the device unsatisfactory for its intended purpose. See, e.g., McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1353-56 (Fed. Cir. 2001); In re Gordon, 733 F.2d 900, 902 (Fed. Cir. 1984); see generally MPEP § 2143.01. To modify any of the devices disclosed in Robinson and Moriya et al. to have fanless air paths would render those devices unsatisfactory for their intended purposes of humidification and/or dehumidification since, as discussed above, the devices rely heavily on fans to fulfill those purposes. Therefore, neither Robinson and Moriya et

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al. may be cited as a primary obviousness reference under 35 U.S.C. § 103(a) against any of the pending claims as herein amended.

In light of the above amendments and remarks, it is submitted that the application is in condition for allowance. Such action is therefore respectfully requested at an early date.

Respectfully submitted,

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I hereby certify that this paper, document or fee is being deposited on the date indicated above with the United States Postal Service as First Class Mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, under the provisions of 37 C.F.R. § 1.8.

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